



## **Millennium BCP: Optimization of the Branches' Closure Process**

**Nova School of Business and Economics**

**João Paulo Rebouço Martins**

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Professor Sara Maria Fernandes Alves

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João Paulo Rebouço Martins

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## **Abstract**

Nowadays, a significant number of banks in Portugal are facing a bank-branch restructuring problem, and Millennium BCP is not an exception. The closure of branches is a major component of profit maximization through the reduction in operational and personnel costs but also an opportunity to approach the idea of “baking of future” and start thinking on the benefits of the digital era. This dissertation centers on a current high-impact organizational problem addressed by the company and consists in a proposal of optimization to the model that Millennium BCP uses. Even though measures of performance are usually considered the most important elements in evaluating the viability of branches, there is evidence suggesting that other general factors can be important to assess branch potential, such as the influx on branches, business dimensions of a branch and its location, which will be addressed in this project.

## **Resumo**

Hoje em dia, um número significativo de bancos em Portugal estão a passar por programas de reestruturação, e o Millennium BCP não é exceção. O encerramento de sucursais é um dos instrumentos usados para se maximizar o lucro através da redução de custos operativos e com pessoal, mas serve também como oportunidade para abordar a ideia de “banca do futuro” e como a pensar nos benefícios que advém da era digital. Esta tese foca-se num problema atual com alto impacto organizacional proposto pela empresa e consiste numa otimização do modelo que o Millennium usa atualmente. Apesar de as métricas financeiras serem consideradas as mais importantes para avaliar a viabilidades das sucursais, existem outros fatores que podem ser importantes para reconhecer esse potencial tais como, a afluências às sucursais, as dimensões do negócio de cada sucursal e a sua localização, que serão abordados neste projeto.

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## **Objectives of the internship**

### **Aim of the dissertation**

The main goal of this optimization is not only achieves a maximization of the bank's profits but also intends to contribute to a greater focus on the future of the global banking sector and a stronger commitment with the digital era. By performing an analysis on the closure process of branches, Millennium can pursue for a change of the traditional profile of doing business and the way that customers relate with the bank, mainly through the new technologies and remote channels which include the digital signage, Internet and adoption of mobile devices.

The company decided that the indicator of Performance did not have a significant preponderance on the analysis and that the process of identifying branches was not accurate using the current model, creating an opportunity for optimization. Following the purpose of a Direct Research Internship to have a problem solving format addressed by the company, this dissertation seeks to optimize the process by including some indicators which will make the decision more reliable. As conclusion, a branch closure will be proposed, providing all the information, to be performed next year.

### **Personal objectives**

This experience also added value to my personal and social development. The internship was integrated into the department of quality and support to the retail network - DQAR. Doing this project during my internship at Millennium BCP was another challenge in my academic path because I had to support the branches' network in their business as a member of the department, and at the same time I had to conduct the study and development of this dissertation. The experience of working in one of the largest institutions in the Portuguese banking sector provided me the ability to develop a greater understanding of the business and more important, prepare to my professional future life by developing my capabilities, acquire

responsibilities and increase the awareness on the importance of team work. Nevertheless, the goals for the internship were met.

The main topic in which I was involved in my internship was the Rewarding System to the employees. This task is directly related with relevant academic topics learnt on the Human Resources Management classes during the Masters in which we studied organizations that use rewarding systems and incentives to improve the performance of their workers. Hence, I could put in practice all the acknowledgment acquired during the Masters and analyze a real situation faced inside a big organization with a positive outcome on the performance. In addition, Millennium also provided me the experience to integrate distinct knowledge areas by visiting some branches and participates actively in daily tasks of the Department such as, making and updating closing packs for the branches, optimize operating processes on the branches and provide all the assistance to the colleagues on the retail network.

## **Literature Review**

### **Banks' Restructures**

The problem addressed by Millennium to study in this dissertation is mainly motivated by the Restructuring Plan that Millennium was facing along the recent years but also by merges that have been taking place in the main national banks, cases of Novo Banco and more recently Banif. It is important to assess the roots to this expansion in the number of branches that can act as jeopardy in a critical situation like the one Millennium and other Portuguese banks are facing. Therefore, I conducted a research about the evolution on the number of restructures in Portuguese Banks.

According to a study performed by Cabral and Majure (1992) on the evolution of the branch restructures in our country, the number of branches suffered a substantial growth between 1985 and 1991 and reaches its peak by doubling the numbers in the following four

years. The two economists used a theoretical model that aims to explain the differences, similarities and segments of competition based on two main indicators, the growth rate indicator and the differences between the two banks that presented the highest rate. The model considered 18 Portuguese districts, including information on the location of the branches on urban and rural areas. The conclusion follows the strategy used by Millennium which indicates that the rushed increase on the number of branches in the 90s was done to compete with the branch network of the other banks in the market. It is possible to conclude that banks clearly used a Red Ocean Strategy to retaliate against the increase on the number of branches that the competitors were presenting. Moreover, the conclusion obtained that higher the dimension of the bank, greater will be the probabilities to conduct this action plan, goes in accordance with the strategy assumed by Millennium to be the largest private bank in Portugal with a branches' network that has become a target due to the ongoing restructuring process.

On the other side, the development of new technologies served as a buffer to the expansion of the branches' network seen in the past years. A few years ago all the banking transactions and activities were taking place at branches but nowadays, technologies are impacting the way banking is performed, allowing them to spread their branch-network beyond the physical spaces. With this technology revolution that the world is facing in the past few years, branches were forced to change the way they were operating, assuming a different role in banking business and banks start looking to allocate its branches into new spaces with potential to attract new clients, cases of shopping-centers, supermarkets or universities (Howland, 2000). These ideas support this work since it encourages the closure of non-profitable branches to reinforce the focus on the digital era, creating opportunities to open a "Point Millennium", designation to branches of the future with a new "Look and Feel", tailored services and digital components, which is one the main goals expected from this project.

## **Branches' Location Problem**

During a closure process, the location choice of the branch that will receive the clients and resources of the branch that is closed is a critical topic to the managers of the bank. Boufounou (1995) relied on a Greek bank as a reference to conduct a study which is highly related with the one that will be developed and optimized on this dissertation since it established branch goals, evaluated branches' performance and recommended new locations. In fact, in this model, Boufounou identified the volume of deposits as the main indicator for the choice of the new branches' location and measurement of performance.

Thus, based on this key feature assumed by the author, the model estimates the capability of a branch to attract the clients to make there the deposits, taking into account the area where the branch is located, meaning in rural, urban or coastal areas and its specific characteristics. Moreover, additional information was collected using principal component analysis, mainly referring other location characteristics like the competitive position of the bank, the degree of trade in that area and internal branch characteristics. According to the model, the number of employees, the branch age, the presence of competitors and the commercial characteristics of the area are factors that impact the total volume of deposits registered in a branch and affect the location choice.

## **The largest Private Bank in Portugal**

### **Millennium BCP: Distinctive values of an organization in quality of service**

Back in 1985, Millennium BCP was born as Banco Comercial Português. Millennium BCP focuses on differentiating from the competition through the good quality of service provided to Clients, the suitable segmentation of the market, as can be seen in Figure 1, and the innovation that is an intrinsic value of the organization from the beginning.



Millennium BCP is considered the largest Private Bank in Portugal with a total of 2.215.000 customers<sup>1</sup> and it is an organization that always seeks to go further and provide a better service to the Client, not despising their values of respect for the institutions and people. Although the diminishing of confidence from external investors in the sector, the bank occupies a privileged position in the Portuguese market and is doing all the efforts to benefit from the recovery of the Portuguese economy, mainly through the support that they give to the Business sector. The Roadmap is well defined between the organization, and the aim for this year is to enhance growth in high-value Customers, emphasizing the increase on profitability.

**Figure 1. Segmentation of Millennium Clients**

	Mass Market	Prestige and Business
<b>Description</b>	Low volume of business, High amount of points of distribution with geographical proximity and standardized solutions adjusted to the most commons customers' needs	Clients have an account manager that acts as a proactive link between them and the bank and Provides an exclusive value proposition adapted to the sub segments of Clients.
<b>Volume of Clients in % <sup>2</sup></b>	89%	11%
<b>Profits <sup>3</sup></b>	51%	49%

The segmentation provided always an additional value in the perception of the business and a point of differentiation for the company. Currently, the segmentation that characterizes the bank divides the customers into two distinct groups, Individuals and Companies. Inside the Individuals, there is the Mass Market, the Prestige segment and the Private, customers with a higher amount of resources. Among the Companies, it can be divided into Business, Corporate and companies with or without customers' manager. (**Exhibit 1**).

<sup>1</sup> Second largest physical distribution network in Portugal (691 branches), overcome by Caixa Geral de Depósitos.

<sup>2</sup> Number of Clients in September 2015 - 2.215.000.

<sup>3</sup> Total Profits registered in the first semester of 2015 - 240,7 M €.

## **Innovation as Core Value**

The focus on customers, the vocation for excellence, ethics and responsibility, the quality of the service provided and innovation were always part of its organizational culture and act as distinctive and differentiated values from the bank to face the competition and achieve a sustainable position in the Portuguese banking sector. In fact, Millennium BCP was the first bank in Portugal to offer a bundle of products, called Integrated Solutions. In a situation that families are increasing their awareness in the management of their budgets, Millennium BCP endeavors to have available products that follow that logic of savings and simplification.

Clients are the most important asset to the bank. The organization has an intrinsic value proposition of always listen to the client and doing their best to understand and solve their needs and requirements. For that, Millennium BCP offers a bundle of financial products and services both to Individuals and Business. As Carlos Santos Ferreira, President of the board of directors of Millennium BCP from 2008 to 2012 once said, *"Banco Comercial Português was innovator and pioneer from its beginning. It was the first private Portuguese bank to be created from the scratch after the Revolution of 1974 with a modern approach, innovative and a truly distinctive service of excellence. I also want to emphasize the enormous professionalism of the workers who built this house."*

## **Methodology Analysis**

### **Diagnostic: Closure of Branches in Portugal**

Back in September 2013, the European Commission of Commerce and Competition announced a formal decision with the Portuguese authorities regarding the Recapitalization Plan for Millennium BCP, in the context of the access to public funding for the reinforcement of own funds Core Tier I. The bank had to demonstrate its strength and feasibility to pursue its activities in a sustainable way and enhance that the organization complies with the European

Union rules and guidelines in what concerns the Portuguese State aid. Together with Millennium, also BPI and Banif were targeted to reduce the dependency of the State. To reduce costs, the Commission advised cuts in the number of branches and personnel.

Since 2010, the six main banking institutions – BCP, CGD, Santander Totta, BPI, Banif and BES/Novo Banco closed 503 branches (**Exhibit 2**). This process of closure is happening in our country in a big scale and a rapid pace, with particular incidence for Millennium and Santander Totta and the tendency for the sector will continue.

In addition, this recapitalization plan for the bank sector also affects the employees. Due to the requirement of the European Commission of Commerce, Millennium had to reduce the personnel in 25% until the end of 2015. In fact, Millennium was the bank that suffered more with the cuts of the workers. Therefore, during the last year, the bank decreased the number of employees in 816 to a total of 7.768 workers. In the six main national banks, the situation did not change and impresses negatively. There was a cut in 4.250 jobs in the last 4 years and sector's estimates predicted a reduction of 8.000 employees between 2011 and 2017, end of the period for recapitalization of the bank sector.

Despite these concerns with the profits and reduction of costs with personnel, it is also relevant to mention the role of the financial disintermediation in this diagnostic. The appearance of new players that started to compete on the services that were so far provided to the customers only by traditional branches, has affected the position of banks over the past years.

### **Millennium BCP efforts to meet the requirements**

Millennium BCP was forced to reduce the number of branches caused by the solicitude of the European Commission regarding the efficiency ratios of the bank. Back in 2013 the bank had a ratio of 753 clients per Mass Market branches, while the average benchmark of the

banking sector in the UE was higher in almost 50%. Knowing the financial situation of Portugal and considering that it is not a country with big dimensions, it is possible to understand that Millennium was in excess regarding the physic spaces, relatively to the 2.300.000 Clients at the time. These numbers concerned the bank that responded immediately to the Commission, aiming to a higher short term target ratio, still below the benchmark average.

For these reasons, since 2012 the bank has closed 209 branches with a particular focus on the year of 2014 with the greatest amount registered so far: 79 closures. The President of the group, Nuno Amado explained, *“We are reducing our costs base to adapt to the reality and challenges of the banking business, which changed in the last years. Only doing that, was possible to recover from a negative net income of 740,5 million Euros in 2013 to net profit of 241 million Euros registered in June 2015”*. All these changes have a significant impact in Clients but also in Millennium’s employees since they have to be moved and reallocated geographically into other branches. It could also have an impact in the quality of the bank, customers’ satisfaction and some financial metrics of the organization.

The effort made was recognized and, for the year of 2015 the tendency slowed down. This tendency can be explained by the fact that the bank reached the target of 700 agencies defined between itself, the national authorities and the Directorate General for Competition of the European Commission, under the State aid that benefited the bank, with an anticipation of three years. BCP President Nuno Amado highlighted the strong reduction of the dependence on State aid and support, which fell from 9 billion of Euros 3 years ago, to an amount of 750 million of Euros nowadays. This had a tremendous influence for the return on profits in 2015. However, this dynamic of closures and cuts is not exclusive from Portugal. To support that, results from the agency Reuters indicates that the largest banks in Europe proceed to the sale or closure of 5.300 branches in the last year.

## Analysis

It is fundamental for the organization to do an accurate analysis in these closing processes since it has costs associated and implies changes in the structure and personnel. The closure can be made in two different ways: close a physic space of a branch and transfer the clients and employees to another branch, with geographic similarity or through the merger of two branches with relocation in a new or in an existing space. This second option might include construction's costs in building a new space or adapt one to receive the resources of the other that was closed.

### Scoring of Attractiveness – Current Model

Currently, the decision of closing one Millennium's branch is taken based on two main indicators. For the decision process, the organization takes into account metrics relatively to the Clients but also to the employees, and the performance and dimensions of the branch are on the roots of that choice. For that, the bank filters the decision based on a Scoring of Attractiveness, which goes from "A" to "F"; with "A" being the branches with top performance and good customer portfolios and "F", small branches with poor commercial performance that the bank might have no interest to keep them open (**Exhibit 3**).

This scoring is an indicator set by the bank for each branch, which is grounded by the commercial performance and by its business dimensions, being the current solution to monitor the evolution of the network and identify the branches with potential to close.

### Indicator of Performance

Branches are fundamental for the operational and financial results of the bank, so it is important to have a metric that exhibits and ranks them among the network. It is the so-called Indicator of Performance (IP), a relevant indicator done quarterly and annually, which comprises six variables and provides a classification to each branch, branch's director and each

Prestige and Business' customer manager. The 6 variables used to compute the Indicator of Performance are: **Resources, Credit, Overdue Credit, Clients, Cross Selling and Joker** (**Exhibit 4**). Higher the IP, better the branch or the employee is placed among the organization's network and therefore, greater will be the influence on the classification of the scoring. This metric is supported by a weekly indicator that analyses the branches' performance in the products available for campaign.

The first four variables are considered strategic variables for the branches and for all these variables there is an indicator associated, the GRO which measures the degree of goal attainment in comparison with the purposed for a certain variable. GRO is one of the most important indicators for this work project, as it will be appraised further, and is the one used to compute the final indicator of performance.

#### **Business dimensions**

The second factor that influences the Scoring of Attractiveness is based on the importance of the clients' portfolio held by the branch. To compute the indicator of each branches' business dimensions, the banks considers the total number of active clients and the total amount of resources held by the branch. Millennium also used to classify the branches based on the number of cash flow transactions. However, this metric was not properly applied since it acted only as an adjustment, not having a significant impact for the final classification. Each branch is ranked based on the values of these two factors of the business dimension and with their respective weight it is given a final classification of dimension (see Figure 2).

## Recommendations

### Optimization and Improvement of the model - GRO Index of Attractiveness

This dissertation does not intend to redefine the process but optimize the strategy to classify Millennium's branches and develop a method to identify potential closures. Currently, there are few important factors, which were explained before, that are taken into account. Therefore, due to the recapitalization plan this choice needs to be more concrete, more accurate and achieve more efficient results in this closing intervention since we are talking about decisions that will rarely be reversible.

Millennium's vision is very focused on the intention of sales and effective contact that branches have with the customers. Hence, for the computation of the branch's attractiveness in this optimized model, I considered important to include a factor referring the influx of customers to the branches. This way, Millennium could assess the satisfaction and commitment of the customers and identify the branches that cannot have a sales approach to them due to the low influx of visits. The two other main factors for the computation will continue to be the branches' performance which indicates the branch's degree of commercial activity and its respective business dimensions, meaning the importance of the Clients portfolio held by the branch. Having three indicators, which will contribute equally with a weight of 1/3 for the final GRO classification, allows the model to be more precise<sup>4</sup>.

The focus on the optimization was done inside these three core factors and the preponderance of the sub-indicators. Hence, it was now time to make the decision on which sub-indicators should be included in the model and the weight that each one of them should assume in the method decision. It was necessary to conduct a benchmark analysis to all the

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<sup>4</sup> Due to the segmentation carried out by Millennium, it was done a separate analysis and GRO Index for each segment.

indicators who still not have a GRO indicator, to find the goals and objectives for that variables among the network. This benchmark was done with employees who are responsible for monitoring the transactions of a branch's machines and through the average of the metrics used, case of active clients or branches' turnover.

Based on the idea that an index of attractiveness should be simple and intuitive for the organization, the weights of each sub-indicator were defined to go in accordance with the current model used by Millennium and with the preponderance that each element has among the map of campaigns. This way, it was possible to conduct a value for the Performance, Dimensions of Business and Influx to each branch, which will be in the basis of the final GRO computation and assessment of the less valuable branches to the bank.

Commercial activity of a branch can be a volatile component since it depends on the clients' satisfaction and choices, the degree of consumption and savings among the population, the banking sector situation in Portugal or even due to geographical conditions of location that affect some branches. Due to this volatility it was imposed a limitation on the sub-indicators used in the computation of the Performance and Dimensions, to not have results that could bias the classification towards a disfavoring conclusion since it can either result in a benefit or jeopardize the outcome of the index. The limitation to this model follows the one used by the company in other variables, by restraining the degree of goal attainment of active clients, total resources, turnover indicator, number of monthly transactions and daily cash flow transactions to a maximum GRO of 200%.



**Figure 2. Comparative summary between the current model and the optimized model proposed**

Actual Model	New Model
<b>Scoring of Attractiveness</b>	<b>GRO Index of Attractiveness</b>
Branches classified from A to F	Branches classified with a GRO index (%) - Based on the expected of each indicator ( $GRO = \frac{\text{Realized}}{\text{Expected}}$ )
Indicators: - Performance (50%) - Business Dimensions (50%)	Indicators: - Performance (33%) - Business Dimensions (33%) - Influx to Branches (33%)
Performance: - Performance Indicator (40%) - Campaigns Indicator (60%) Business Dimensions: - Active Clients (30%) - Total Resources (70%)	Performance: - Cross Selling GRO Indicator (70%) - Clients GRO Indicator (30%) Business Dimensions: - Turnover GRO Indicator (40%) - GRO Total Resources (40%) - GRO Active Clients (20%) Influx on Branches: - GRO Cash Flow transactions (50%) - GRO Total Machines Transaction (25%) - GRO Customer Experience (25%)
Example: Scoring Attractiveness Av. Roma - B Scoring Attractiveness Caranguejeira - B	Example: GRO Index Av. Roma – 109% GRO Index Caranguejeira – 77%

### Positive aspects

The major difference between the current model and this optimization is that it will be considered an Attractiveness Index based on a classification measured by the final GRO of the branch, a metric already addressed in this dissertation. The computation of the degree of goal attainment is done by dividing the accomplished in that variable for the expected, in which the highest value indicates the best branch in that particular metric among the network. By not using the Scoring of Attractiveness classified from A to F, Millennium can identify specific branches with potential to close based on an index of percentage and not on a range of classification in which there is no visible difference between them. For example, having ten

branches with a classification of F does not mean that all the branches are equal and have the same dimensions and commercial performance, as can be seen in the example of Figure 2. In fact, through the scoring of attractiveness, it was hard to identify which are the best branches among each segment of classification and, which should be closed. It is also important to affirm that the bank's strategy is not close the largest number of branches since Millennium values its position as the largest private bank in Portugal. In fact, the strategy is to optimize and close the less attractive ones to invest and focus in the "future of banking". As it will be seen further in the *Results*, the GRO Index will solve this problem and will allow Millennium to present a lower number of "bad branches", which is beneficial to the organization.

## Indicators of the New Model - GRO Scoring of Attractiveness

### Influx of customers to branches

On the roots of the decision to include this variable it is a very intuitive way of thinking which adds value and accuracy to the result. Presenting an elevated degree of clients' influx induces that the branch is a highly tradable space with a great number of transactions and consequently, there is a great possibility to affirm that is a profitable branch and valuable to the business. Thus, to assess the real value of the branches' influx, the **total amount of transactions** of each branch was added to the model. The data used was the average of the months of 2015, for the sum of total monthly transactions for all the machines present in the physic spaces - ATMs (Automated Teller Machine), CATs and safe fey, which have different purposes for payments, withdrawals and deposits. To predict the objective of transactions and compute the GRO index, it was done a benchmark based on the average of 10.000 transactions a month registered in the retail business.

Moreover, it is also important to include the **Cash Flow transactions** made in the branches since it represents almost 20% of the time spent in their daily business. Considering

the number of daily cash flow transactions each branch was classified with a specific GRO indicator. Nonetheless, this element was not incorporated in the Prestige and Business branches' analysis because cash flow transactions are mainly used in the Mass Market branches that deal directly with cash, being a basic commercial activity to assess the influx and performance of a branch. The information used to do the benchmark for the objective on this activity was once more the average of daily cash flow transactions of the retail network, which lies on the 100 transactions per day. Consequently, a branch that registers more than 120 transactions in cash a day is considered highly transactional. Results from a study of Millennium state that over 50% of the clients make transactions in branches that are not directly responsible for their accounts. This information supports the idea that a good and profitable branch can have a great influx and performance despite the size of its portfolio of clients.

Since the client was always on the leading concerns of the company, they are assuming a “*be client centric*” approach to keep the distinctive value in which the Client has a central position among the business. This way, the bank is clearly assuming a Blue Ocean Strategy which creates a competitive advantage over the main competitors based on the clients' perspective that Millennium values the most. Therefore, to appraise the degree of engagement and satisfaction of the customers it was included the GRO of the **Customer Experience** Indicator, which is an information about the customers' satisfaction and comprises a percentage of the employee's GRO of Net Promoter Score and the NPS of the bank itself.

In the case of Mass Market, cash flow transaction assumes a bigger weight (50%) over the Customer Experience (25%) and total transactions on the machines (25%) since it is a commercial action that takes greater predominance in the daily branch activity.<sup>5</sup>

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<sup>5</sup> **Degree of Influx (for MM)** = 50% \* cash flow transactions + 25% \* customer experience + 25% \* branches machines' transactions

**Degree of Influx (for Prestige and Business)** = 50% \* customer experience + 50% \* branches machines' transaction

**Table 1. GRO Index of Attractiveness: Computation of the Indicator on the degree of Influx to the branches**

					Obj Transactions		10.000	Obj Cash Flow Transactions		100		
CC	Name	Seg	Regional Direction	Coordination	Customer Experience	Δ Transactions	GRO Transac	Cash Flow Transactions	Cash Flow	Classification	GRO Cash Flow	Influx
20	ALPENDORADA	MM	DOURO / MONTEM	NORTH	110%	9.657	97%	80	Yes	Medium Transact	80%	92%
29	OEIRAS PARQUE	MM	OEIRAS	SOUTH	96%	36.444	200%	2	No	Low Transactiona	2%	75%
32	VEISEU REPESES	MM	VEISEU	NORTH	115%	4.706	47%	79	Yes	Medium Transact	79%	80%

## Branch Performance

This project enhances greater relevance to the **Cross Selling** and **Clients' indicators** that comes in the Performance Indicator to underlying the decision. Basing the scoring only on the IP was not an efficient approach to assess the regular performance of the branch because it includes some variables that cannot be directly related to the branches' sales performance with the customer, such as diversification of resources or variation of the overdue credit clients' portfolio. The idea is to assess the performance of branches in the *clients' booking moment* and on their main daily activities like the sales of commercial products which easily allows the organization to identify a profitable active branch in the essence of the business.

The ratios of these two variables on the Indicator of Performance are:

$$\text{Clients} = \frac{5}{100} \% \text{ Wages Catchment} + \frac{5}{100} \% \text{ Clients Upgrade and Acquisition}$$

$$\text{Cross Selling} = \frac{5}{100} \% \text{ Integrated Solutions} + \frac{2,5}{100} \% \text{ Credit Cards} + \frac{15}{100} \% \text{ Insurances}$$

Cross-Selling is a fundamental practice in the banking sector of selling products or services to an existing client. It is linked with the size of the business, the banking sector itself and the financial metrics required by Millennium to compete in the industry. The need of including this variable in the model follows with the purposes of cross-selling which can be either to increase the revenue derived from clients or to enhance the relationship with them by

serving the client with what they want from the organization. This particular aspect is highly valued by the bank because it acts as a core and intrinsic differentiation among the industry.

Reinforcing the importance of these two metrics in the decision process to have a more accurate sales-oriented result was supported by some members of the department, which were in the creation of the Scoring of Attractiveness, adding value to this optimization. Therefore, all the information regarding the “Cross Selling” and “Clients” variables was collected and added to the model used for the decision. The precision of this kind of decisions is important since the market is very volatile and a branch can operate better in one year than in the other or observe its sales affected due to a particular reason. So, to obtain a more precise result, it was gathered the annual information of 2014 and 2015 for the Clients indicator – clients and wages’ upgrade and acquisition and also for the variables of Cross Selling, more precisely to the sales of insurances, credit cards and integrated solutions.

The weights used for the computation of the Performance in the three segments<sup>6</sup> were based on the weighing that each product has among the retail network according to the map of campaigns defined, in which the insurances and Clients’ indicators assume a clear position of preponderance.

**Table 2. GRO Index of Attractiveness: Variables used in the computation of the Indicator of Performance**

CC	Name	Seg	Regional Direction	Coordination	Clients 2014	Cross Selling 2014	Clients 2015	Cross Selling 2015	Performance
					Annual GRO	Annual GRO	Annual GRO	Annual GRO	
20	ALPENDORADA	MM	DOURO / MONTEMUR	NORTH	105	104	145	117	115%
29	OEIRAS PARQUE	MM	OEIRAS	SOUTH	152	106	175	117	127%
32	WISEU REPESES	MM	WISEU	NORTH	90	53	90	133	92%

<sup>6</sup> **Performance** = 30% \* Avg (Clients 2014; Clients 2015) + 70% \* Avg (Cross Selling 2014; Cross Selling 2015)

## Branch's Business Dimensions

It was relevant to optimize this indicator with a factor that clearly identifies branches with a small scale of business that are in the major position to suffer a closing intervention. Therefore, adding to the **number of active Clients** and **total amount of Resources/ Credit** <sup>7</sup> that the bank already uses to assess the dimensions of a branch business, I combined the **Turnover Indicator** which comprises the value of sales and services relatively to its business, after deducting taxes and trade discounts and is an element that highly enhances the profitability of the branch. The Turnover Indicator clearly helps the organization in the moment of evaluating the business volume of each branch, which is a result of the operational activities performed and the number of clients held by the branch that make transactions. Since commercial activity is directly related with the dimensions of the business, it makes sense to include this indicator because it complements the metrics used for the computation of a branch's performance.

The objectives for these indicators used to build the GRO Indicator were based on the benchmark given by the average that the network exhibits in the turnover Indicator (50M €), total resources (30M €) and number of active clients (2.000 clients) among the three segments and in the fact that a Prestige manager usually is responsible for the portfolio of 250 clients. Relatively to the weights assigned on the indicators, they were defined according to the current model used by Millennium in which, the company gives a much higher weighing to total resources compared with the number of active clients, as seen in Figure 2. This idea is corroborated by the fact that a branch can have a low number of clients but a considerable business dimension because the customers contribute with a high amount of financial assets.

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<sup>7</sup> Total amount of Resources for the Mass Market and Prestige, and Total amount of Credit to the branches that operate on the business Segment since companies usually incur in debt to support their initial business.

Hence, to this indicator it is important to attribute a significant preponderance to the Turnover Indicator (40%) in accordance with the Total Resources (40%), since it will results in a valuable impact on the purpose of identify branches that have a low business volume and can possibly jeopardize the commercial activity and profit goals of the company and the branch itself<sup>8</sup>.

**Table 3. GRO Index of Attractiveness: Computation of the Business Dimensions' Indicator of each branch**

CC	Name	Seg	Regional Direction	Coordination	Total Clients	Obj	2.000	Obj	30.000.000	Obj	50.000.000	Dimension
						Active	GRO Active Clients	Resources	GRO Resources	Turnover	GRO Turnover	
20	ALPENDORADA	MM	DOURO / MONTEM	NORTH	2.454	1.864	93%	18.675.487	62%	45.245.325	90%	80%
29	OEIRAS PARQUE	MM	OEIRAS	SOUTH	2.439	1.944	97%	10.988.380	37%	52.410.511	105%	76%
32	VISEU REPESES	MM	VISEU	NORTH	2.280	1.620	81%	13.086.547	44%	36.751.545	74%	63%

### Geographic location of branches

The choice of the **geographic location** is one of the most important decisions in the process, which can goes beyond the financials metrics. In line with the needs of the banking sector to reduce branches and employees, it is unaffordable for the banks to have two distinct branches in the same location, separated by 300 meters. In these cases, commonly the optimal and the most adequate proposal is to merge the two spaces, moving the employees and the customers' base for one of them, allowing the closure of the other branch.

The risk of business loss in clients, resources and performance is smaller, the greater the geographical proximity between the branches. Hence, to contemplate the possible risk of loss in the business, it was considered an increment to the final GRO Index of Attractiveness of each branch, relative to the distances with the closest branch. In order to value the performance and attractiveness of a branch, the greater the distance to the nearest branch (> 15 Km), higher will be the percentage of enhancement contributing to the final classification (+ 5%) (**Exhibit 5**).

<sup>8</sup> **Business Dimensions** = 20% \* # Act Clients + 40% \* Total Resources + 40% \* Turnover of Business

## What Results?

The analysis and optimization of the model were made to the three segments but the branches of the Prestige and Business segments were not included in the closure decision due to their particularity. The reason that reduces the openness of closure on this type of branches is that they can exhibit a great number in profits, regardless the number of active customers, but also because it is common that a specialized management branch operates in the same “physic door” than a Mass Market.

Thus, after the limitations and increments to obtain a more accurate final GRO index of attractiveness, it is possible to identify properly the Mass Market branches and the ones who are operating best and worst in the business. The outcome of the optimization follow the goals for this dissertation and resulted in the identification of 64 Mass Market branches with a GRO between 50% - 75% and considered less valuable to the company, a presence of 267 in a range of 75% - 100%, 189 branches that are attaining the objectives with a GRO index between 100% and 120%, 70 above the average with a GRO between 120% and 140% and 26 that are operating extremely well in the business, presenting a GRO > 140% (**Exhibit 6**).

Looking to these results on the Mass Market it is possible to consider that is still a long path to go and there are opportunities to improve among the network. Comparing with the current model (Scoring of Attractiveness - **Exhibit 7**) it can be seen an optimization of almost 60% in the MM branches considered less attractive (from 153 “F” Branches to 64 “GRO 50% - 75%” Branches), since the goal is not to close a large number of branches, but the worst ones.

**Table 4. Example of the Final GRO Index of Attractiveness: Results for the 3 best and worst branches among the network**

CC	Name	Seg	Regional Direction	Coordination	Dimension	Performance	Influx	GRO Index of Attractiveness	Distance	Localization increment	Final GRO of Attractiveness	Classification
844	TAGUS PARK	MM	OEIRAS	SOUTH	41%	75%	47%	54%	1,3	0%	54%	50-75
282	MONDIM DE BASTO	MM	GUIMARÃES / FAFE	NORTH	58%	71%	40%	56%	23,9	5%	59%	50-75
6254	MACEIRA LIS	MM	LEIRIA	CENTRE	34%	101%	41%	59%	8,2	1,25%	59%	50-75
6053	VIANA DO CASTELO	MM	ALTO MINHO	NORTH	200%	129%	152%	160%	1,1	0%	160%	>140
2200	V.N.FAMALICÃO FUNDAÇÃO	MM	FAMALICÃO/SANTO TI	NORTH	195%	119%	174%	163%	0,8	0%	163%	>140
6099	PENAFIEL	MM	TÂMEGA	NORTH	187%	166%	159%	171%	7,6	1,25%	173%	>140



## Proposed Solution – Closure policy of Maceira Lis and implementation process to Batalha

For the reasons enounced, the decision was to take the closure study on the Mass Market branches. This way, it was possible to identify a segment of branches that are performing below the expectations but also, the branch with the poorest GRO index among the retail network. Taking on the results presented on the Table 4, it is observable that the two Mass Market branches that have an aggregate of the worst performance, low business dimensions and weak influx of customers are Tagus Park and Maceira Lis. Concerning the particular conditions of the Tagus Park branch, which is located on the Headquarters of the company, the proposal on this dissertation will be the closure of **Maceira Lis**, in Leiria with a GRO index of 59% (**Exhibit 8**).

The decision continues in the choice of moving the business and portfolio of customers to the branch that is closely related in geographic and business' terms. Here, the localization assumes a preponderant factor on the decision and resulted in the move to the branch located in **Batalha** which is drifted from 8 kilometers, diminishing the possibility of business loss. This branch also has a poor GRO Index Classification (81%) and business characteristics similar to the ones of Maceira Lis, which consequently supports the decision (**Exhibit 9**).

Furthermore, it was made an analysis to the branch that will be closed regarding its business volume, financial assets, number of Clients per Segment and the share of resources and credit in the area of Leiria to assess the degree of operational transactions compared with the numbers of the bank (**Exhibit 10**). The bank collects this information and does a similar analysis to all the branches that are targeted to close its business and operations. The proposal of merging these two branches will grow the number of clients attended in Batalha, increasing relatively the number of employees working there and impacting the GRO Index of the branch through the positive improvement on the performance (**Exhibit 11**).

These changes carries benefits but also risks and costs that Millennium needs to mitigate. The benefits concerns the reduction of the need of one employee (1 FTE), resulted from the merge and other savings related with typical closures of spaces or offices (FST's). Concerning the costs, there is the investment of construction, to be defined in the receiving branch and capital losses of 98.000€ with the wastage of a building which is property of a fund (**Exhibit 12**). It is then possible to indicate that the payback of this operation is 2 year and 1 month, meaning the period of time needed to recover the investment done with the closure.

## **Future and Conclusion**

The GRO Index of Attractiveness was already implemented during my internship to match and confirms the results given by the current model and is expected that Millennium will continue to use this tool to assess the branches with potential to close, adding value to this dissertation.

After 2015, the future of Millennium branches will continue on the same track concerning the closure theme, yet in a much more reduced pace and frequency, so the decision is increasingly important. In case of success, they will be able to concentrate their business, close branches that impacts negatively the business and creates the opportunity to move from the traditional branches to more futuristic and autonomous spaces.

Millennium should continue with the goal of being the largest private bank in Portugal and with this optimized model based on the GRO index, they can analyze their options: Should they close all the branches with a poor GRO index which are not attractive in terms of business and focus on the digital era; should they decide to keep with branches that do not present such appealing numbers, or should they concentrate branches on the urban areas that have an average GRO index, creating openings to “branches of the future” that will be more tailored to match clients profiles and requirements in each location?

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